

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): In a data communication network, a method for operating a client node, said method comprising:

formatting an IP packet to include a header comprising a globally significant IP address identifying a realm and a locally significant IP address identifying a destination of said IP packet within said realm;

selecting one of said globally significant IP address and said locally significant IP address for use in forwarding said packet based on a location within the network; and

transmitting said IP packet using said selected address from said packet;

wherein said globally significant IP address and said locally significant IP address are both configured for use in forwarding said packet without address translation; and

wherein said header comprises an encapsulation IP header and an inner IP header, said encapsulation IP header comprising said globally significant IP address identifying said realm and a globally significant IP address identifying a realm of the client node.

Claim 2 (original): The method of claim 1 further comprising:

resolving said globally significant IP address from a first component of a globally significant name; and

resolving said locally significant IP address from a second component of a locally significant name.

Claim 3 (original): The method of claim 2 wherein resolving said globally significant IP address comprises contacting a global DNS server.

Claim 4 (original): The method of claim 2 wherein resolving said globally significant IP address comprises contacting a local DNS server.

Claim 5 (original): The method of claim 2 wherein resolving said globally significant IP address comprises contacting an SIP server.

Claim 6 (original): The method of claim 1 wherein said globally significant IP address belongs to a range specified for realms.

Claims 7-10 (canceled).

Claim 11 (currently amended): In a data communication network, a computer program product for operating an IP stack at a client node, said computer program product comprising:

- code that formats an IP packet to include a header comprising a globally significant IP address identifying a realm and a locally significant IP address identifying a destination of said IP packet within said realm;

- code that selects one of said globally significant IP address and said locally significant IP address for use in forwarding said packet based on a location within the network;

- code that transmits said IP packet using said selected address from said packet;

and

- a computer-readable storage medium that stores the codes;

- wherein said globally significant IP address and said locally significant IP address are both configured for use in forwarding said packet without address translation; and

wherein said header comprises an encapsulation IP header and an inner IP header, said encapsulation IP header comprising said globally significant IP address identifying said realm and a globally significant IP address identifying a realm of the client node.

Claim 12 (original): The computer program product of claim 11 further comprising:

code that resolves said globally significant IP address from a first component of a globally significant name; and

code that resolves said locally significant IP address from a second component of a locally significant name.

Claim 13 (original): The computer program product of claim 12 wherein said code that resolves said globally significant IP address comprises code that contacts a global DNS server.

Claim 14 (original): The computer program product of claim 12 wherein said code that resolves said globally significant IP address comprises code that contacts a local DNS server.

Claim 15 (original): The computer program product of claim 12 wherein said code that resolves said globally significant IP address comprises code that contacts an SIP server.

Claim 16 (original): The computer program product of claim 11 wherein said globally significant IP address belongs to a range specified for realms.

Claims 17-20 (canceled).

Claim 21 (currently amended): In a data communication network, apparatus for operating an IP stack at a client node, said apparatus comprising:

a processor; and

a memory storing instructions executed by said processor, said instructions comprising:

code that formats an IP packet to include a header comprising a globally significant IP address identifying a realm and a locally significant IP address identifying a destination of said IP packet within said realm;

code that selects one of said globally significant IP address and said locally significant IP address for use in forwarding said packet based on a location within the network; and

code that transmits said IP packet using said selected address from said packet;

wherein said globally significant IP address and said locally significant IP address are both configured for use in forwarding said packet without address translation; and

wherein said header comprises an encapsulation IP header and an inner IP header, said encapsulation IP header comprising said globally significant IP address identifying said realm and a globally significant IP address identifying a realm of the client node.

Claim 22 (original): The apparatus of claim 21 wherein said instructions further comprise:

code that resolves said globally significant IP address from a first component of a globally significant name; and

code that resolves said locally significant IP address from a second component of a locally significant name.

Claim 23 (original): The apparatus of claim 22 wherein said code that resolves said globally significant IP address comprises code that contacts a global DNS server.

Claim 24 (original): The apparatus of claim 22 wherein said code that resolves said globally significant IP address comprises code that contacts a local DNS server.

Claim 25 (original): The apparatus of claim 22 wherein said code that resolves said globally significant IP address comprises code that contacts an SIP server.

Claim 26 (original): The apparatus of claim 21 wherein said globally significant IP address belongs to a range specified for realms.

Claims 27-30 (canceled).

Claim 31 (currently amended): In a data communication network, apparatus for operating a client node, said apparatus comprising:

means for formatting an IP packet to include a header comprising a globally significant IP address identifying a realm and a locally significant IP address identifying a destination of said IP packet within said realm;

means for selecting one of said globally significant IP address and said locally significant IP address for use in forwarding said packet based on a location within the network; and

means for transmitting said IP packet using said selected address from said packet;

wherein said globally significant IP address and said locally significant IP address are both configured for use in forwarding said packet without address translation; and

wherein said header comprises an encapsulation IP header and an inner IP header, said encapsulation IP header comprising said globally significant IP address identifying said realm and a globally significant IP address identifying a realm of the client node.

Claim 32 (canceled).

Claim 33 (previously presented): The method of claim 1 wherein the client node comprises a globally unique IP address.

Claim 34 (previously presented): The method of claim 33 wherein said globally unique IP address comprises a concatenation of a globally significant IP address of the client node's realm and the client's node locally unique address.

Claims 35-36 (canceled).

Claim 37 (currently amended): ~~The method of claim 35~~ In a data communication network, a method for operating a client node, said method comprising:
formatting an IP packet to include a header comprising a globally significant IP address identifying a realm and a locally significant IP address identifying a destination of said IP packet within said realm;
selecting one of said globally significant IP address and said locally significant IP address for use in forwarding said packet based on a location within the network; and
transmitting said IP packet using said selected address from said packet;
wherein said globally significant IP address and said locally significant IP address are both configured for use in forwarding said packet without address translation; and
wherein said header comprises an encapsulation IP header and an inner IP header, said inner IP header comprises ~~comprising~~ said locally significant IP address identifying the destination of said IP packet and a locally significant IP address identifying the client node.

Claim 38 (previously presented): The method of claim 1 wherein transmitting said IP packet comprises utilizing only said globally significant IP address in selecting a next hop node.

Claim 39 (new): In a data communication network, apparatus for operating an IP stack at a client node, said apparatus comprising:

a processor; and

a memory storing instructions executed by said processor, said instructions comprising:

code that formats an IP packet to include a header comprising a globally significant IP address identifying a realm and a locally significant IP address identifying a destination of said IP packet within said realm;

code that selects one of said globally significant IP address and said locally significant IP address for use in forwarding said packet based on a location within the network; and

code that transmits said IP packet using said selected address from said packet;

wherein said globally significant IP address and said locally significant IP address are both configured for use in forwarding said packet without address translation; and

wherein said header comprises an encapsulation IP header and an inner IP header, said inner IP header comprising said locally significant IP address identifying the destination of said IP packet and a locally significant IP address identifying the client node.

Claim 40 (new): The apparatus of claim 39 wherein said instructions further comprise:

code that resolves said globally significant IP address from a first component of a globally significant name; and

code that resolves said locally significant IP address from a second component of a locally significant name.

Claim 41 (new): The apparatus of claim 40 wherein said code that resolves said globally significant IP address comprises code that contacts a global DNS server.

Claim 42 (new): The apparatus of claim 40 wherein said code that resolves said globally significant IP address comprises code that contacts a local DNS server.

Claim 43 (new): The apparatus of claim 39 wherein said globally significant IP address belongs to a range specified for realms.

Claim 44 (new): In a data communication network, apparatus for operating a client node, said apparatus comprising:

means for formatting an IP packet to include a header comprising a globally significant IP address identifying a realm and a locally significant IP address identifying a destination of said IP packet within said realm;

means for selecting one of said globally significant IP address and said locally significant IP address for use in forwarding said packet based on a location within the network; and

means for transmitting said IP packet using said selected address from said packet;

wherein said globally significant IP address and said locally significant IP address are both configured for use in forwarding said packet without address translation; and

wherein said header comprises an encapsulation IP header and an inner IP header, said inner IP header comprising said locally significant IP address identifying the destination of said IP packet and a locally significant IP address identifying the client node.

Claim 45 (new): The apparatus of claim 44 further comprising:

means for resolving said globally significant IP address from a first component of a globally significant name; and

means for resolving said locally significant IP address from a second component of a locally significant name.

Claim 46 (new): The apparatus of claim 45 wherein means for resolving said globally significant IP address comprises means for contacting a global DNS server.

Claim 47 (new): The apparatus of claim 45 wherein means for resolving said globally significant IP address comprises means for contacting a local DNS server.

Claim 48 (new): The apparatus of claim 45 wherein means for resolving said globally significant IP address comprises means for contacting an SIP server.